

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-29. (Cancelled)

30. (Original) A method of treating an autoimmune disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a polypeptide comprising

(a) an extracellular region of the protein set forth in SEQ ID NO:2, or

(b) an extracellular region of a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added;

wherein said polypeptide comprises the amino acid sequence Phe-Asp-Pro-Pro-Pro-Phe (SEQ ID NO:21) and inhibits the activation of lymphocytes.

31. (Original) The method of claim 30, wherein the polypeptide consists of

(a) an extracellular region of the protein set forth in SEQ ID NO:2, or

(b) an extracellular region of a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added.

32. (Original) A method of treating an autoimmune disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a polypeptide fragment comprising amino acid residues 1-140 of SEQ ID NO:2.

33. (Original) A method of treating an autoimmune disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a polypeptide fragment consisting of amino acid residues 1-140 of SEQ ID NO:2.

34. (Original) A method of treating an autoimmune disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a homodimer molecule consisting of two polypeptide fragments bridged through disulfide bonds to each other, wherein each polypeptide fragment comprises the amino acid sequence Phe-Asp-Pro-Pro-Phe (SEQ ID NO:21) and comprises

- (a) an extracellular region of the protein set forth in SEQ ID NO:2, or
  - (b) an extracellular region of a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added;
- wherein an antibody reactive with the homodimer molecule induces proliferation of peripheral blood lymphocytes in the presence of an antibody reactive with CD3.

35. (Original) The method of claim 34, wherein each polypeptide fragment comprises an extracellular region of the protein set forth in SEQ ID NO:2.

36. (Original) The method of claim 35, wherein each polypeptide fragment consists of an extracellular region of the protein set forth in SEQ ID NO:2.

37. (Original) The method of claim 34, wherein each polypeptide fragment consists of an extracellular region of a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added.

38. (Original) A method of treating an autoimmune disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a fusion polypeptide comprising

- (a) a polypeptide consisting of an extracellular region of
- (I) the protein set forth in SEQ ID NO:2, or
- (II) a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added; and
- (b) a portion of a constant region of a human immunoglobulin heavy chain;

wherein said fusion polypeptide comprises the amino acid sequence Phe-Asp-Pro-Pro-Pro-Phe (SEQ ID NO:21) and inhibits the activation of lymphocytes.

39. (Original) The method of claim 38, wherein the extracellular region of the polypeptide is amino acid residues 1-140 of SEQ ID NO:2.

40. (Original) The method of claim 38, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

41. (Original) The method of claim 39, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

42. (Original) The method of claim 38, wherein the fusion polypeptide consists of

- (a) a polypeptide consisting of an extracellular region of
- (I) the protein set forth in SEQ ID NO:2, or
- (II) a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added; and
- (b) a portion of a constant region of a human immunoglobulin heavy chain.

43. (Original) The method of claim 42, wherein the extracellular region of the polypeptide is amino acid residues 1-140 of SEQ ID NO:2.

44. (Original) The method of claim 42, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

45. (Original) The method of claim 43, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

46. (Original) A method of treating an autoimmune disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a homodimer molecule consisting of two fusion polypeptides bridged through disulfide bonds to each other, wherein each fusion polypeptide comprises

- (a) a polypeptide consisting of an extracellular region of
  - (I) the protein set forth in SEQ ID NO:2, or
  - (II) a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added; and
- (b) a portion of a constant region of a human immunoglobulin heavy chain;  
wherein each fusion polypeptide comprises the amino acid sequence Phe-Asp-Pro-Pro-Pro-Phe (SEQ ID NO:21) and inhibits the activation of lymphocytes.

47. (Original) The method of claim 46, wherein each fusion polypeptide consists of

- (a) a polypeptide consisting of an extracellular region of
  - (I) the protein set forth in SEQ ID NO:2, or

- (II) a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added; and  
(b) a portion of a constant region of a human immunoglobulin heavy chain.

48. (Original) The method of claim 46, wherein the extracellular region of the polypeptide is amino acid residues 1-140 of SEQ ID NO:2.

49. (Original) The method of claim 46, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

50. (Original) The method of claim 48, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

51. (Original) The method of claim 47, wherein the extracellular region of the polypeptide is amino acid residues 1-140 of SEQ ID NO:2.

52. (Original) The method of claim 47, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

53. (Original) The method of claim 51, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

54. (Original) A method of treating an autoimmune disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition

comprising (i) a pharmaceutically acceptable carrier and (ii) a polypeptide consisting of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acids are substituted, deleted or added; wherein,

(a) the polypeptide comprises the amino acid sequence Phe-Asp-Pro-Pro-Pro-Phe (SEQ ID NO:21) in its extracellular region,

(b) the polypeptide comprises the amino acid sequence Tyr-Met-Phe-Met (SEQ ID NO:22) in its cytoplasmic region, and

(c) an antibody reactive with the polypeptide induces proliferation of peripheral blood lymphocytes in the presence of an antibody reactive with CD3.

55-83. (Cancelled)

84. (Original) A method of treating an allergic disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a polypeptide comprising

(a) an extracellular region of the protein set forth in SEQ ID NO:2, or

(b) an extracellular region of a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added;

wherein said polypeptide comprises the amino acid sequence Phe-Asp-Pro-Pro-Pro-Phe (SEQ ID NO:21) and inhibits the activation of lymphocytes.

85. (Original) The method of claim 84, wherein the polypeptide consists of

(a) an extracellular region of the protein set forth in SEQ ID NO:2, or

(b) an extracellular region of a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added.

86. (Original) A method of treating an allergic disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition

comprising (i) a pharmaceutically acceptable carrier and (ii) a polypeptide fragment comprising amino acid residues 1-140 of SEQ ID NO:2.

87. (Original) A method of treating an allergic disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a polypeptide fragment consisting of amino acid residues 1-140 of SEQ ID NO:2.

88. (Original) A method of treating an allergic disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a homodimer molecule consisting of two polypeptide fragments bridged through disulfide bonds to each other, wherein each polypeptide fragment comprises the amino acid sequence Phe-Asp-Pro-Pro-Phe (SEQ ID NO:21) and comprises

- (a) an extracellular region of the protein set forth in SEQ ID NO:2, or
  - (b) an extracellular region of a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added;
- wherein an antibody reactive with the homodimer molecule induces proliferation of peripheral blood lymphocytes in the presence of an antibody reactive with CD3.

89. (Original) The method of claim 88, wherein each polypeptide fragment comprises an extracellular region of the protein set forth in SEQ ID NO:2.

90. (Original) The method of claim 89, wherein each polypeptide fragment consists of an extracellular region of the protein set forth in SEQ ID NO:2.

91. (Original) The method of claim 88, wherein each polypeptide fragment consists of an extracellular region of a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added.

92. (Original) A method of treating an allergic disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a fusion polypeptide comprising  
(a) a polypeptide consisting of an extracellular region of  
(I) the protein set forth in SEQ ID NO:2, or  
(II) a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added; and  
(b) a portion of a constant region of a human immunoglobulin heavy chain;  
wherein said fusion polypeptide comprises the amino acid sequence Phe-Asp-Pro-Pro-Pro-Phe (SEQ ID NO:21) and inhibits the activation of lymphocytes.

93. (Original) The method of claim 92, wherein the extracellular region of the polypeptide is amino acid residues 1-140 of SEQ ID NO:2.

94. (Original) The method of claim 92, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

95. (Original) The method of claim 93, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

96. (Original) The method of claim 92, wherein the fusion polypeptide consists of  
(a) a polypeptide consisting of an extracellular region of



- (I) the protein set forth in SEQ ID NO:2, or
- (II) a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added; and
- (b) a portion of a constant region of a human immunoglobulin heavy chain.

97. (Original) The method of claim 96, wherein the extracellular region the polypeptide is amino acid residues 1-140 of SEQ ID NO:2.

98. (Original) The method of claim 96, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

99. (Original) The method of claim 97, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

100. (Original) A method of treating an allergic disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a homodimer molecule consisting of two fusion polypeptides bridged through disulfide bonds to each other, wherein each fusion polypeptide comprises

- (a) a polypeptide consisting of an extracellular region of
    - (I) the protein set forth in SEQ ID NO:2, or
    - (II) a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added; and
  - (b) a portion of a constant region of a human immunoglobulin heavy chain;
- wherein each fusion polypeptide comprises the amino acid sequence Phe-Asp-Pro-Pro-Pro-Phe (SEQ ID NO:21) and inhibits the activation of lymphocytes.

101. (Original) The method of claim 100, wherein each fusion polypeptide consists of  
(a) a polypeptide consisting of an extracellular region of  
(I) the protein set forth in SEQ ID NO:2, or  
(II) a protein that consists of the amino acid sequence of SEQ ID NO:2 in which  
one to ten amino acid residues are substituted, deleted or added; and  
(b) a portion of a constant region of a human immunoglobulin heavy chain.

102. (Original) The method of claim 100, wherein the extracellular region of the  
polypeptide is amino acid residues 1-140 of SEQ ID NO:2.

103. (Original) The method of claim 100, wherein the portion of the constant region of a  
human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain  
of human IgG heavy chain.

104. (Original) The method of claim 102, wherein the portion of the constant region of a  
human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain  
of human IgG heavy chain.

105. (Original) The method of claim 101, wherein the extracellular region of the  
polypeptide is amino acid residues 1-140 of SEQ ID NO:2.

106. (Original) The method of claim 101, wherein the portion of the constant region of a  
human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain  
of human IgG heavy chain.

107. (Original) The method of claim 105, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

108. (Original) A method of treating an allergic disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a polypeptide consisting of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acids are substituted, deleted or added; wherein,

(a) the polypeptide comprises the amino acid sequence Phe-Asp-Pro-Pro-Pro-Phe (SEQ ID NO:21) in its extracellular region,

(b) the polypeptide comprises the amino acid sequence Tyr-Met-Phe-Met (SEQ ID NO:22) in its cytoplasmic region, and

(c) an antibody reactive with the polypeptide induces proliferation of peripheral blood lymphocytes in the presence of an antibody reactive with CD3.

109-137. (Cancelled)

138. (Original) A method of treating an inflammatory disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a polypeptide comprising

(a) an extracellular region of the protein set forth in SEQ ID NO:2, or

(b) an extracellular region of a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added;

wherein said polypeptide comprises the amino acid sequence Phe-Asp-Pro-Pro-Pro-Phe (SEQ ID NO:21) and inhibits the activation of lymphocytes.

139. (Original) The method of claim 138, wherein the polypeptide consists of

- (a) an extracellular region of the protein set forth in SEQ ID NO:2, or
- (b) an extracellular region of a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added.

140. (Original) A method of treating an inflammatory disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a polypeptide fragment comprising amino acid residues 1-140 of SEQ ID NO:2.

141. (Original) A method of treating an inflammatory disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a polypeptide fragment consisting of amino acid residues 1-140 of SEQ ID NO:2.

142. (Original) A method of treating an inflammatory disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a homodimer molecule consisting of two polypeptide fragments bridged through disulfide bonds to each other, wherein each polypeptide fragment comprises the amino acid sequence Phe-Asp-Pro-Pro-Phe (SEQ ID NO:21) and comprises

- (a) an extracellular region of the protein set forth in SEQ ID NO:2, or
- (b) an extracellular region of a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added;

wherein an antibody reactive with the homodimer molecule induces proliferation of peripheral blood lymphocytes in the presence of an antibody reactive with CD3.

143. (Original) The method of claim 142, wherein each polypeptide fragment comprises an extracellular region of the protein set forth in SEQ ID NO:2.

144. (Original) The method of claim 143, wherein each polypeptide fragment consists of an extracellular region of the protein set forth in SEQ ID NO:2.

145. (Original) The method of claim 142, wherein each polypeptide fragment consists of an extracellular region of a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added.

146. (Original) A method of treating an inflammatory disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a fusion polypeptide comprising

(a) a polypeptide consisting of an extracellular region of

(I) the protein set forth in SEQ ID NO:2, or

(II) a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added; and

(b) a portion of a constant region of a human immunoglobulin heavy chain;

wherein said fusion polypeptide comprises the amino acid sequence Phe-Asp-Pro-Pro-Pro-Phe (SEQ ID NO:21) and inhibits the activation of lymphocytes.

147. (Original) The method of claim 146, wherein the extracellular region of the polypeptide is amino acid residues 1-140 of SEQ ID NO:2.

148. (Original) The method of claim 146, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

149. (Original) The method of claim 147, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

150. (Original) The method of claim 146, wherein the fusion polypeptide consists of  
(a) a polypeptide consisting of an extracellular region of  
(I) the protein set forth in SEQ ID NO:2, or  
(II) a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added; and  
(b) a portion of a constant region of a human immunoglobulin heavy chain.

151. (Original) The method of claim 150, wherein the extracellular region of the polypeptide is amino acid residues 1-140 of SEQ ID NO:2.

152. (Original) The method of claim 150, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

153. (Original) The method of claim 151, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

154. (Original) A method of treating an inflammatory disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a homodimer molecule consisting of two fusion polypeptides bridged through disulfide bonds to each other, wherein each fusion polypeptide comprises

(a) a polypeptide consisting of an extracellular region of

(I) the protein set forth in SEQ ID NO:2, or  
(II) a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added; and  
(b) a portion of a constant region of a human immunoglobulin heavy chain;  
wherein each fusion polypeptide comprises the amino acid sequence Phe-Asp-Pro-Pro-Pro-Phe (SEQ ID NO:21) and inhibits the activation of lymphocytes.

155. (Original) The method of claim 154, wherein each fusion polypeptide consists of

(a) a polypeptide consisting of an extracellular region of

(I) the protein set forth in SEQ ID NO:2, or

(II) a protein that consists of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acid residues are substituted, deleted or added; and

(b) a portion of a constant region of a human immunoglobulin heavy chain.

156. (Original) The method of claim 154, wherein the extracellular region of the polypeptide is amino acid residues 1-140 of SEQ ID NO:2.

157. (Original) The method of claim 154, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

158. (Original) The method of claim 156, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

159. (Original) The method of claim 155, wherein the extracellular region of the polypeptide is amino acid residues 1-140 of SEQ ID NO:2.

160. (Original) The method of claim 155, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

161. (Original) The method of claim 159, wherein the portion of the constant region of a human immunoglobulin heavy chain consists of the hinge region, CH2 domain, and CH3 domain of human IgG heavy chain.

162. (Original) A method of treating an inflammatory disease in a subject, the method comprising administering to the subject an effective amount of a pharmaceutical composition comprising (i) a pharmaceutically acceptable carrier and (ii) a polypeptide consisting of the amino acid sequence of SEQ ID NO:2 in which one to ten amino acids are substituted, deleted or added; wherein,

(a) the polypeptide comprises the amino acid sequence Phe-Asp-Pro-Pro-Pro-Phe (SEQ ID NO:21) in its extracellular region,

(b) the polypeptide comprises the amino acid sequence Tyr-Met-Phe-Met (SEQ ID NO:22) in its cytoplasmic region, and

(c) an antibody reactive with the polypeptide induces proliferation of peripheral blood lymphocytes in the presence of an antibody reactive with CD3.